

**What is claimed:**

1.           An optical drive device, comprising:  
  
          an optical drive controller adapted to couple to and cause a laser diode driver to provide signals to drive a laser diode, the optical drive controller capable of testing a channel between the optical drive controller and a laser diode driver and, in response to testing a channel between the optical drive controller and a laser diode driver, generating a set of calibration signals to program a drive characteristic associated with a laser diode driver to accommodate a characteristic of a channel between the optical drive controller and a laser diode driver.
  
2.           The optical drive device of claim 1, wherein the optical drive controller outputs one or more test signals to a laser diode driver, the optical drive controller receiving one or more monitor signals generated in response to the one or more test signals, the optical drive controller generating one or more calibration signals responsive to the monitor signals.
  
3.           The optical drive device of claim 1, wherein the optical drive controller generates a control signal to set a laser diode driver in a calibration mode for a calibration process and generates a control signal to set a laser diode driver in a normal operation mode.

4. The optical drive device of claim 1, wherein the calibration signals adjust circuits within the optical drive controller.
5. The optical drive device of claim 1, wherein the calibration signals adjust circuits within a laser diode driver.
6. The optical drive device of claim 1, wherein the optical drive controller outputs a test signal to a laser diode driver, the optical drive controller receiving a monitor signal generated in response to the test signal, the optical drive controller outputting a second test signal, responsive to the monitor signal, for calibrating a laser diode driver in an iterative process.
7. The optical drive device of claim 6, wherein the optical drive controller generates a control signal to set a laser diode driver in a calibration mode for a calibration process and generates a control signal to set a laser diode driver in a normal operation mode following the iterative process.

8. An optical drive device, comprising:  
an optical drive controller; and  
a laser diode driver providing drive signals to a laser diode, the laser diode driver responsive to the optical drive controller to selectively provide read and write drive signals to the laser diode; and  
a signal channel coupling the optical drive controller to the laser diode driver,  
the optical drive controller outputting test signals over the signal channel, the laser diode driver receiving the test signals from the signal channel and characterizing the signal channel and responsively generating a monitor signal, the laser diode driver providing the monitor signal to the optical drive controller.
9. The optical drive device of claim 8, wherein the optical drive controller generates a calibration signal in response to the monitor signal and, responsive to the calibration signal, programs a drive characteristic of a laser diode driver to accommodate a characteristic of the signal channel between the optical drive controller and a laser diode driver determined by testing.
10. The optical drive device of claim 9, wherein the signal channel couples through a flexible cable and wherein the laser diode driver and the laser diode are mounted on an optical head of the optical drive device.

11. The optical drive device of claim 9, wherein the optical drive controller outputs a first control signal to set the laser diode driver in a calibration mode for a calibration process and generates a second control signal to set the laser diode driver in a normal operation mode.

12. The optical drive device of claim 7, wherein the optical drive controller generates a calibration signal in response to the monitor signal and, responsive to the calibration signal, programs a drive characteristic within the optical drive controller to accommodate a characteristic of the signal channel between the optical drive controller and a laser diode driver determined by testing.